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Computer Dictionary and Handbook

by
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Prefa

Because personal computers are now c
hours of training, more and more systems
nesses. As a result, they are reaching users
use of computers. These users, especially
need to learn exactly what the move to n
search for answers, they are perplexed b
industry, and they discover that they n
computer language. They must study and
it is becoming very unbusinesslike, and
what is a 64K RAM, a semiconductor, or
When the first computer is installed in
and managers of the business apprehens
office and administrative personnel are sus
changes that take place. Management m
and knowledgeable approach to explaini
they must know something about the "my
Filling the need for this information is
tion to the definitions of terms, of equa
serve as a "state-of-the-art" guide section
essential elements of computer concepts
to time.
This is a "browsing" dictionary. It is a
be brief. Many definitions and explanatio
so. Users of this book can easily and leis
supplemental entries of an "area," such
detail about the products, procedures, p
tions. While we have included many def
the art of programming, the basics of el
components of systems, we have limited t
them as clear and "unconfusing" as the l
product manuals, applications notes, in
descriptions, seminar notes, and conferenc

cards, start-stop times are checked by clock notations, completions are developed by recording dials at inquiry stations throughout plants.

transaction tape — A paper or magnetic tape carrying information that is to be used to up-date filed information. This filed information is often on a master tape.

transceiver — A terminal device that can both transmit and receive signals.

transceiver, card — A device that transmits and receives data from a punched card to a punched card. It is essentially a conversion device which at the sending end reads the card and transmits the data over the wire. At the receiving end it punches the data into a card.

transcribe — To copy, with or without translating, from one external storage medium to another.

transcriber — The equipment associated with a computer for the purpose of transferring the input or output data from a record of information in a given language to the computer medium and language, or from a computer to a record of information.

transcription — Conversion of data from one language, medium, or code to another. Includes the reading, translating, and recording (writing) operations.

transcription break — A flowchart symbol or device that shows the relationship between two files. The symbol is directional and suggests the flow of information from one file to the file that is affected by the information. The operation symbol should be on the history lines of the file that is affected.

transducer — A device that converts energy from one form to another; e.g., a quartz crystal imbedded in mercury can change electrical energy to sound energy as is done in sonic delay lines in computer-storage systems.

transducer, incremental — A rotary or linear feedback device with discrete on-off pulses. All pulses are the same, and there is always the same number of signals per unit length or per revolution. Direction is determined by special logic circuits.

transducers, analog/digital — Analog transducers output either voltages or currents. Digital transducers fall into two basic categories. Some incorporate a sensing unit as part of an oscillator circuit and determine the frequency of that circuit as a function of the measured quantity. Others detect the position of a primary sensor and convert that quantity into a coded digital word.

transducer, syntax — A subroutine which recognizes the phase class in an artificial language, normally expressed in Backus normal form.

transducer translating device — A device for converting error of the controlled member of a servomechanism into an electrical signal that can be used in correcting the error.

transfer — 1. To change control by means of an instruction or signal that specifies the location of the next instruction and directs the computer to that instruction; to jump. A transfer is used to alter the normal sequence control of the computer. 2. To copy, exchange, read, record, store, transmit, transport, or write data. 3. To terminate one sequence of instructions and begin another sequence.

transfer, average data, rate — *See* data transfer rate, average.

transfer, block — The conveyance of a group of consecutive words from one place to another.

transfer check — A check on the accuracy of a data transfer.

transfer circuit — A circuit which connects communication centers of two or more separate networks in order to transfer the traffic between the networks.

transfer command — A particular order or instruction which changes control from one part of the program to another part by indicating a remote instruction.

transfer, conditional — *See* branch, conditional.

transfer control, unconditional — *Same as* branch, unconditional.

transfer function — A mathematical expression or expressions that describe(s) the relationship between physical conditions at two different points in time or space in a given system, and also describes the role played by the intervening time or space.

transfer instruction — *Same as* branch instruction.

transfer instruction, conditional — *See* branch, conditional.

transfer instruction, unconditional — *See* branch, unconditional.

transfer medium — The material which enables the transfer of ink during printing, i.e., sheets, ribbons, plastic film.

transfer of control — *Same as* branch.

transfer operation — An operation that moves information from one storage location or one storage medium to another, e.g., read, record, copy, transmit, or exchange. Transfer is sometimes taken to refer specifically to movement between different storage media.

transfer, parallel — In a parallel transfer, all the bits stored in one string of flip-flops are transferred simultaneously to another string, using one wire (or a pair of wires) for each flip-flop.

transfer peak — *See* data transfer rate.

transfer, peripheral — A procedure or process for transferring data between two units of peripheral or auxiliary equipment.

transfer, radial — A procedure or process for transferring data between peripheral equipment and the internal memory of the machine.

transfer rate, character — The speed at which data may be read from or written to the unit, exclusive of seek or latency delays.

transfer rate, data — The speed at which data may be read from or written to the device, from the lowest to the highest speed and density available.

transfer rate, instantaneous — *See* data transfer rate.

transfer rate, maximum — The maximum number of binary digits per second which can be accommodated on the channel. For a duplex channel (input/output) the transfer rate is usually shown for one direction only.

transfer rate, system — A measure of how fast data can be read from or written into the storage medium. Often this is qualified further by specifying a burst transfer rate and an average transfer rate. The burst rate is the actual speed during reading or writing. The average rate is measured for a long transfer of several thousand bytes. It is usually less than the burst rate because of the gaps between blocks of data or time spent searching for the next block of data.

transfers, automatic-word — An instruction that uses the data-break facility to allow concurrent information processing and data acquisition during block transfers.

data-communication equipment and telephone lines, linking the teller consoles to the computer; and an electronic computer system for control and computation.

Telpak — A service offered by telephone companies for leasing of wideband channels between two or more points. Telpak channels can be leased in groups of 60 or 240 voice-grade channels.

temporary storage — Internal-storage locations reserved for intermediate or partial results.

tens complement — The radix complement of a numeral whose radix is ten. It is obtained by subtracting each digit of a number from 9, and adding 1 to the least significant digit of the resultant number. For example, the tens complement of 2456 is 7544.

terminal — 1. A point at which information can enter or leave a communication network. 2. An input/output device designed to receive data in an environment associated with the job to be performed, and capable of transmitting entries to, and obtaining output from, the system of which it is a part.

terminal, addressable-pollable — A terminal is addressable when it has its own unique identifier. All data sent to the terminal must be preceded by their addresses. Pollable means that the terminal responds to status inquiries from the computer. Each terminal in the system is queried by the computer in succession. The ability of the terminal to respond to the poll and to identify itself makes it pollable.

terminal, ASCII — American Standard Code for Information Interchange is a standard code used by many computers, video-display terminals, teleprinters and computer peripherals. A full 8-bit ASCII word may be transmitted in parallel or serial form, with the eighth bit often providing parity information. In an ASCII terminal, keyboard encoders convert a single switch closure into an ASCII word; character generators convert stored ASCII data words (and some timing commands) into groups of dots suitable for raster-scan display.

terminal, basic — An input-output device that allows a human operator to encode characters in computer-readable form and allows a computer to produce printed or displayed characters in a human-readable form via a communica-

tions link. Sometimes called a dumb terminal.

terminal brightness — Variable brightness takes several forms in video displays. One type, a standard feature in most displays, is an overall brightness control that operates like the one on a television receiver. This control can adapt the screen to the operator's working environment, helping to counteract possible eye-straining effects by allowing the operator to select a comfortable screen brightness. Another type of variable brightness, called dual intensity, allows specific characters, words, or screen areas to be highlighted. This can be a useful device for finding errors. It is particularly useful when data are being entered into the keyboard. Then the entered characters can be shown more brightly, while the other material remains less bright in the background.

terminal code, ASCII — The American Standard Code for Information Interchange (ASCII), which assigns a 7-bit binary number for each letter of the alphabet, number, and punctuation mark. Certain machine functions, such as carriage return, end of transmission, line feed, tab, etc., are also assigned codes. ASCII is the standard code used in tv typewriters, many video driver systems, and the newer teletypewriters (the older models used the Baudot code).

terminal components — Components needed to perform most functions: keyboard, display, microprocessor, memory, storage, printers, modems, and adapters.

terminal, control — A unit that supervises communication between the consoles and the processing center. It receives incoming messages at random intervals, stores them until the central processor is ready to process them, and returns the processed replies to the remote consoles which originated the transactions.

terminal controller, minicomputer — Front-end computers, in addition to acting as larger host-computer interfaces, can also function as terminal controllers and often as peripheral controllers.

terminal control, remote — A facility that allows the central-site technician to perform diagnostic checks without the need to send anyone to a remote point that is giving trouble. Each remote terminal and connecting link shares the services of the controller, thus reducing man-

power as well as the skill and training needed to maintain network continuity. Shared standby equipment at the central site reduces the amount of standby equipment needed.

terminal control system — A control program which handles multiterminal operations on some computer systems. It schedules the input/output processing and the use of hardware resources in a multitasking, multiterminal environment.

terminal control system, disk — Typically, a control program which efficiently handles multiterminal operations in conjunction with the disc operating system. It provides task scheduling, i/o management, file access, priority dispatching, and fast task handling.

terminal cursor — A cursor is a movable mark that locates a character on a crt screen. Most terminals have a cursor of some sort. On the smarter terminals, the cursor can be moved around freely, but usually the movements are more restricted. Typical cursors include a line under the character at hand, a nondestructive blinking white block, and a white block on which an existing character on the screen is reversed. Typical cursor keyboard commands are up, down, left, right, home, and return left to next line on new line command. With the up, down, left, and right keys, there is usually a repeating feature for rapid long-distance cursor movement. When cursor control keys are not enough, other interactive control devices are sometimes available as options. These include a joystick, a light pen, a track ball, and a set of thumbwheel controls. These techniques are most useful on graphic terminals.

terminal daisy-chaining — Daisy-chaining is generally the same as multidropping, except that no modems are used; however, the terminals share the same data link. The data link comes from the computer, goes to the first terminal, comes out of the first terminal and on to the second terminal, etc. All terminals share the same data link and the same computer port.

terminal, data — A device that modulates and/or demodulates data between one input/output device and a data-transmission link.

terminal, data-communication — A data station is an all-purpose remote-com-